

Mr. Julius Genachowski  
Chairman  
Federal Communications Commission  
445 12<sup>th</sup> Street SW  
Washington, DC 20554

Dear Chairman Genachowski:

In addition to being a licensed Professional Land Surveyor in Maryland, I am the editor of Professional Surveyor Magazine, a monthly national magazine serving the land surveying profession.

I feel the need, both on my own behalf and that of our 35,000 readers in the profession, to express serious concerns regarding the Federal Communications Commission (FCC) granting LightSquared, LLC conditional approval to build a nationwide 4G-LTE wireless broadband network (FCC File No. SAT-MOD-20101118-00239). Testing completed by the technical working group has demonstrated that LightSquared's technology will interfere with Global Positioning System (GPS) receivers, degrading their performance in the best case scenario and completely jamming GPS receivers in the worst case scenario.

The DOD, FAA, DHS, NASA, DOI, DOT, DOC, and the professional land surveying and engineering professions, have all expressed serious reservations in regards to this plan by LightSquared, LLC to build 40,000 ground stations in the U.S. that could cause widespread interference to GPS signals. This network of ground stations will transmit signals within the L-band frequency immediately adjacent to the GPS L1 frequency at more than one billion times the strength of the low-power GPS signal from space. Furthermore, each mobile phone using LightSquared's wireless service would potentially become a portable GPS jamming device by jamming GPS receivers in its immediate vicinity.


Beyond the proven interference to GPS and the long list of U.S. government agencies opposed to the LightSquared plan, the European Commission has also stated their opposition based on the potential to the completely separate and independent Galileo satellite-based navigation system. This could affect not only users of Galileo receivers on the ground, but also European aircraft entering U.S. airspace and utilizing the Galileo system for navigation

High-precision GPS equipment used by land surveyors and other geomatics professionals costing thousands of dollars per receiver would be more adversely affected than the consumer GPS devices given their inherent design. Literally, tens of thousands of high-precision GPS receivers are used in the United States. GPS technology has transformed the way we build and manage our infrastructure, adding a tremendous level of efficiency to the design, construction, and maintenance of roads, bridges, commercial properties, residential subdivisions, parks, farms, golf courses, etc. GPS has become an essential tool for design professionals and it is imperative that these GPS signals are not jeopardized by broadband technology.

Increased broadband access across the U.S. is a laudable goal and one we all support. However, initiatives to that end *must not* have the huge negative economic impacts to precision GPS users,

such as surveyors and farmers, in addition to the serious public safety risks posed by interference to aviation users of both GPS and Galileo. As a practicing land surveyor, member of the Maryland Society of Surveyors, and editor, I urge you to reject the LightSquared application until such time that all tests conclusively demonstrate there is no risk of interference.

Sincerely,

A handwritten signature in black ink, appearing to read 'T. Frazier, Jr.', with a stylized, cursive flourish extending from the end.

Thomas L. Frazier, Jr.  
Professional Land Surveyor (MD, WV, DE)  
Editor, Professional Surveyor Magazine